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THE

MINING WORLD INDEX

of Current Literature

VOL. V FIRST HALF YEAR 1914

By GEO. E. SISLEY
Associate Editor
Mining and Engineering World

An International Bibliography of Mining and the Mining Sciences Compiled and Revised Semi-Annually from the Index of the World's Current Literature Appearing Weekly in "Mining and Engineering World"

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Preface

The fifth volume of The Mining World Index of Current Literature (for the first half of 1914), covers, as in previous volumes, the world's literature on mining, metallurgy and kindred subjects and embraces all reference of any importance to the literature of the field it exclusively represents. It will be noticed that the matter appears in 8-point type, making the reading of same much easier than the 6-point type used in former volumes.

In The Mining World Index of Current Literature are classified all articles appearing in periodical magazines published in America, Europe, Africa and Australia on mining, mining engineering, metallurgy, mining geology, mineralogy, etc.; also the valuable publications of the world's mineral industries institutes and affiliated engineering and technical societies, as well as publications of the federal and state geological surveys and mining bureaus at home and abroad—not to mention new books. All these are indexed by a simple plan, easily understood. By the system of cross-indexing used one can readily find what is wanted on any mining or affiliated subject. In all cases where the title as published is vague a brief digest is given. Where more than one author is given, the first-named appears in the alphabetical arrangement; the others will be found by referring to author's index.

It should be remembered that in the search for some particular article covering a certain subject, where reference of any importance is made in that article to more than one subject, the article will also be indexed under those subjects as well. These may be only a few lines in length, but these few lines may contain just the information you are in search of.

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A

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African World.
Alaska & Northwest Mining Journal.
Allgemeine österreichische Chemiker und Techniker-Zeitung.
Allianza, Mexico.
American Ceramic Society.
American Chemical Society.
American Electrochemical Society.
American Fertilizer.
American Foundrymen's Association.
American Industries.
American Institute of Chemical Engineers.
American Institute of Electrical Engineers.
American Institute of Mining Engineers.
American Iron & Steel Institute.
American Journal of Science.
American Metal Society.
American Metallurgical Society.
American Mining Congress.
American Museum of Safety.
American Peat Society.
American Railway Engineering Association.
American Society of Civil Engineers.
American Society of Engineering Contractors.
American Society of Mechanical Engineers.
American Society of Naval Engineers.
American Wood Preservers' Association.
Anales de la Sociedad Cientifica Argentina.
Annales de Mines, France.
Annales des Mines de Belgique, Belgium.
American Portland Cement Manufacturers.
Association of Engineering Societies.
Association of Mining Electrical Engineers, England.
Association of Railway Electrical Engineers.
Australian Coal & Iron Trade Review, Sydney.
Australasian Institute of Mining Engineers.
Australian Mining Standard, Melbourne.

B

Berg und Hüttenmännische Rundschau, Kattowitz, Germany.
Berg & Hüttenm, Jahrb. Leoben-Pribram.
Bergbau, Germany.
Bergwerks-Zeitung, Germany.
Bergwerkschaftliche Mitteilungen, Germany.
Bergwirtschaftliche, Mitteilungen.
Birmingham Metallurgical Society, England.
Bitumen, Germany.
Black Diamond.
Braunkohle.
Brick & Clay Record.
British Columbia Bureau of Mines.
British Columbia Mining Exchange & Engineering News, B. C.
British Columbia Mining & Engineering Record, B. C.
British Guiana Institute of Mines and Forests.
British Iron & Steel Institute.
Bulletin of the Pan-American Union.

C

Cairo Scientific Society.
California Miners' Association.
California State Mining Bureau.
Canada Department of Mines.
Canada Geological Survey.
Canadian Engineer.
Canadian Mining Institute.
Canadian Mining Journal.
Cassier's Magazine.
Cement.
Cement Age.
Centralblatt der Hütten & Walzwerke, Berlin, Germany.
Chemical Engineer.
Chemical, Metallurgical & Mining Society of South Africa.
Chemiker-Zeitung, Germany.
Chemiker & Techniker-Zeitung, Austria.
Chemist-Analyst.
Cleveland Engineering Society.
Coal Age.
Coal Mining Institute of America.
Coal Trade Bulletin.
Coal & Coke Operator.
Colliery Engineer.
Colliery Guardian, London.
Colorado School of Mines.
Colorado Scientific Society.
Colorado State Bureau of Mines.
Colorado University.
Columbia School of Mines Quarterly.
Compressed Air Magazine.
Connecticut State Geological & Natural History Survey.
Cornwall Mining Association and Institute, England.
Cuerpo de Ingenieros de Minas del Peru, Peru.

D

Der Bergbau, Germany.
Der Erzbergbau, Germany.
Der Kohleninteressent, Bohemia.
Deutsche Bergwerks Zeitung, Germany.
Deutsche Technik, Germany.
Die Fördertechnik, Germany.
Domestic Engineering.

E

Economic Geology.
Edinburgh Geological Society, Scotland.
Eisen Zeitung, Germany.
El Economista Mexicana, Mexico.
El Petrolero Mexicana, Mexico.
Electrical Engineer, London.
Electrical Review, London.
Electrical Review & Western Electrician.
Electrician, London.
Electrotechnik & Maschinenbau, Austria.
Elektroschemische Zeitschrift, Germany.
Engineering Association of New South Wales, Australia.
Engineering, London.
Engineering Magazine.
Engineering Review, London.
Engineering & Contracting.
Engineering & Mining Journal.
Engineers' Club.
Engineers' Society of Eastern Pennsylvania.
Engineers' Society of Western Pennsylvania.
English Ceramic Society, England.
Excavating Engineer.

F

Faraday Society, London.
Federated Malay States Mines Report.
Fer et Acier, France.

Ferrum, Aachen, Germany.
Florida State Geological Survey.
Fördertechnik, Germany.
Franklin Institute.
Fuel Oil Journal.

G

General Electric Review.
Geological Society of America.
Geological Society of South Africa.
Geological Society of Tokyo, Japan.
Geological Society of Washington, D. C.
Georgia Geological Survey.
Giesserei Zeitung, Germany.
Glückauf, Germany.
Great Britain Geological Survey.

I

Idaho State Inspector of Mines.
Ideal Power.
Illinois State Geological Survey.
Illuminating Engineering Society.
Imperial Institute.
India Geological Survey.
India Mining & Geological Institute.
Indian & Eastern Engineer.
Indiana Department of Geology & Natural Resources.
Indust. Chimica, Minerar. e Metallurg., Italy.
Industrial Advocate, Nova Scotia.
Industrial Engineering & Engineering Digest.
Informaciones y Memorias, Boletin de la Sociedad de Ingenieros, Peru.
Informes y Memorias del Instituto Mexicana, de Mines of Metalurgia, Mexico.
Ingeneria, Spain.
Institute of Engineers & Ship Builders, Scotland.
Institute of Marine Engineers, England.
Institution of Mining Engineers, London.
Institution of Mining & Metallurgy, London.
International Association for Testing Materials.
International Congress for Radiology & Electrology.
International Railway Fuel Association.
International Institute of Technical Bibliography.
Iowa Engineer.
Iowa Geological Survey.
Iowa State College Engineering Experiment Station.
Iowa University.
Iron Age.
Iron Trade Review.
Iron & Coal Trades Review, London.
Iron & Steel Institute, London.

J

Jern Kontorets Annaler, Sweden.
Journal du Four Electrique et de l'Electrolyse, France.
Journal du Petrole, France.
Journal of Electricity, Power & Gas.
Journal of Geology.
Journal of Industrial & Engineering Chemistry.

K

Kali, Erz & Kohle, Germany.
Kali, Halle, Germany.
Kansas University Geological Survey.
Kentucky Geological Survey.
Kentucky Mining Institute.
Kentucky University.
Kohle & Erz, Germany.
Kohleninteressent, Germany.

L

La Metallurgia Italiana, Italy.
La Metallurgie du Nord, France.
Lackawanna Chemical Society.
Lake Superior Mining Institute.
L'Echo des Mines de la Metallurgie, Paris, France.
Le Pétrole, France.
Le Phosphate, France.
Levant Trade Review, Turkey.
Liverpool Geological Association, England.
Los Angeles Chamber of Mines & Oil.
Louisiana Geological Survey.
L'Opinion Financiere, France.

M

Madrid Cientifico, Spain.
Malayan Tin & Rubber Journal, F. M. S.
Manchester Association of Engineers, England.
Manchester Mining & Geological Society, England.
Mechanical World, England.
Metall und Erz, Halle, Germany.
Metallurgia Italiana, Italy.
Metallurgical & Chemical Engineering.
Metallurgie & Construction Mechanique, France.
Metallurgie, Germany.
Mexican Institute of Mining & Metallurgy, Mexico.
Mexican Mining Journal.
Michigan Geological Survey.
Midland Institute of Mining, Civil & Mechanical Engineers, England.
Mineral Resources of Oregon.
Mining Engineering, London.
Mining Engineering & Electrical Record, B. C.
Mining Institute of Scotland.
Mining Journal, London.
Mining Magazine, London.
Mining Science.
Mining Society of Nova Scotia.
Mining World & Engineering Record, London.
Mining & Engineering Review, Australia.
Mining & Engineering World.
Mining & Geological Institute of India.
Mining & Metallurgical Society of America.
Mining & Scientific Press.
Minnesota Geological & Natural History Survey.
Mississippi Geological Survey.
Missouri Bureau of Geology and Mines.
Missouri Geological Survey.
Missouri School of Mines.
Mois Minier et Metallurgique, France.
Montan-Zeitung für Oesterreich-Ungarn und die Balkanländer, Austria.
Montana Inspector of Mines' Reports.
Montanistische Rundschau, Germany.

N

National Academy of Sciences.
National Association of Colliery Managers, London.
National Association of Stationary Engineers.
National Geographic Magazine.
National Lime Manufacturers' Association.
Natural Gas Journal.
Nevada University.
New Jersey Geological Survey.
New South Wales Engineering Association.
New Zealand Geological Survey.
New Zealand Institute.
North Carolina Geological Survey.
North of England Institute of Mining & Mechanical Engineers.
North Staffordshire Institute of Mining & Mechanical Engineers.
Northwest Mining & Metallurgy.
Nova Scotia Mining Society.

O

Oesterreichische Zeischrift für Berg- und Huttenwesen, Vienna.

Oil Age.
Oil & Gas Journal.
Oklahoma Geological Survey.
Ontario Bureau of Mines.
Oregon University.

P

Pahasapa Quarterly.
Pan American Union.
Pennsylvania Mines Department.
Pennsylvania Topographic & Geologic Survey.
Peru Today, Lima.
Pétrole, France.
Petroleum, Germany.
Petroleum World, London.
Pfalz-Saarbrücker Bezirksvereins Deutscher Ingenieure, Germany.
Philadelphia Engineers' Club.
Philippine Journal of Science, Manila.
Pittsburgh University.
Popular Mechanics.
Power.
Practical Electricity & Engineering.
Practical Engineer.

Q

Quebec Bureau of Mines.
Quebec Department of Colonization, Mines & Fisheries.
Queensland Geological Survey.
Queensland Government Mining Journal.

R

Radium.
Rassegna Mineraria Metallurgica e Chimica, Italy.
Resoconti delle Riunioni Association, Italy.
Resources of Tennessee.
Revista Minera e Industria de Linares, Spain.
Revista Minera Metallurgica y de Ingenieria, Spain.
Revue d'Electrochimie et d'Electrometallurgie, France.
Revue Noire, France.
Revue Practique des Industries Metallurgiques, France.
Revue Industrielle du Centre, France.
Revue de Metallurgie, France.
Revue des Matériaux de Construction, France.
Rhodesia (Southern) Mines Department.
Rhodesian Chamber of Mines, Bulawayo.
Rigasche Industrie Zeitung, Russia.
Rock Products.
Royal Geological Society of Cornwall, England.
Royal Society of Arts Journal, London.

S

Salt Lake Mining Review.
Science & Art of Mining, England.
Sibley Journal of Engineering.
Slate Trade Gazette, England.
Smithsonian Institution.
Société Amicale des Anciens Élèves de l'École des Maitres-Mineurs de Doual, France.
Société Chimique de Belgique, Belgium.
Société des Ingénieurs Civils de France.
Society of Arts, London.
Society of the Chemical Industry, London.
Society of the Chemical Industry.
South Africa Engineering, London.
South Africa, South Africa.
South African Association of Engineers.
South African Institute of Electrical Engineers.
South African Mining Journal.
South Dakota Engineering Society.
South Dakota Inspector of Mines.
South Dakota School of Mines.
South Staffordshire & Warwickshire Institute of Mining Engineers, England.
South Wales Institute of Engineers, Wales.
Staffordshire Iron & Steel Institute, England.
Stahl und Eisen, Germany.
Stone Trade Journal.
Südwestdeutsche Industrie Zeitung, Prussia.
Sydney University Engineering Society.

T

Technische Blätter, Essen-Ruhr, Germany.
Technische Centralanzeiger, Germany.
Tech. du Nord de la France.
Tennessee State Geological Survey.
Tonindustrie Zeitung, Berlin, Germany.
Transvaal Chamber of Mines, Johannesburg.

U

United States Bureau of Mines.
United States Bureau of Standards.
United States Consular Reports.
United States Department of Commerce and Labor.
United States Geological Survey.
University of Illinois.
University of Texas.
University of Texas Mineral Survey.

V

Vancouver, B. C., Chamber of Mines.
Victoria Chamber of Mines, Australia.
Virginia Geological Survey.

W

Washington Academy of Sciences.
West Australian Mining, Building & Engineering Journal, Kalgoorlie.
West of Scotland Iron & Steel Institute.
West Virginia Geological Survey.
West Virginia Mining Association.
Western Australia Department of Mines.
Western Australia Geological Survey.
Western Australia Institution of Engineers.
Western Chemist & Metallurgist.
Western Engineering.
Western Society of Engineers.
Wisconsin Engineer.
Wisconsin Geological & Natural History Survey.
Wisconsin University.
Wood Preservers' Association.
Wyoming Geological Survey.

Y

Yale Scientific Monthly.

Z

Zeitschrift der Oberschlesischen Berg & Hüttenmannischen Verein, Germany.
Zeitschrift des Internationalen Vereines der Bohringenieure & Bohrtechniker, Austria.
Zeitschrift des Zentral Verbandes der Bergbau Betriebsleiter, Bohemia.
Zeitschrift für Bergrecht, Germany.
Zeitschrift für das gesamte Schiess & Sprengstoffwesen, Germany.
Zeitschrift für des Berg, Hütten & Salinenwesen in preussischen Staate, Germany.
Zeitschrift für Elektrochemie, Germany.
Zeitschrift für praktische Geologie, Germany.
Zeitschrift für Schiess & Sprengstoffw., Germany.
Zentral-Blatt Kunstdünger Industrie, Germany.

Explanations and Abbreviations

The entries show:

(1) The author of the article.

(2) A dash if the name is not apparent.

(3) The title, in italics, of the article or book. Titles in foreign languages are ordinarily followed by a translation or explanation in English.

(4) When the original title is insufficient a brief amplification is added. This addition is in brackets.

(5) The journal in which the article appeared; also the date of issue, and the page on which the article begins.

(6) Approximate number of words. Illustrated articles are indicated by an asterisk (*).

(7) The price. Articles mentioned will be supplied to subscribers of Mining and Engineering World and others at the prices quoted. Two-cent postage stamps will be accepted on orders less than $1. Subscribers will be allowed a discount of 5 cts. if the price of the article exceeds 50 cts.

NOTE.—When there is more than one author to an article, only the first named appears in alphabetical arrangement, the others appearing, however, on the page or pages designated in author's index.

Subjoined is a list of the commoner abbreviations found in this work. They are used chiefly in the names of periodicals, and of associations. The abbreviations will be found easily intelligible at sight, and are what they purport to be—self-explanatory abbreviations, not symbols.

Abst.—Abstract.
Acad.—Academy; Académie; Accademia.
Adv.—Advance.
Afr.—Africa; African.
Akad.—Akademie.
Allgm.—Allgemeine.
Amer.—American.
A. I. M. E.—American Institute Mg. Eng.
Archts.—Architects.
Assn.—Association.
Ber.—Berichte.
Bol.—Boletin; Boletim; Bollettino.
Bull.—Bulletin.
Bur.—Bureau.
Centralbl.—Centralblatt.
C-R.—Compte-Rendu; Resoconti.
Chap.—Chapter.
Chem.—Chemical.
Chemy.—Chemistry.
Coll.—College.
Colly.—Colliery.
Cong.—Congress.
Conv.—Convention.
d.—des (French and German).
Dept.—Department.
Deu.—Deutsche, etc.
Econ.—Economic.
Ed.—Editorial.
Elect.—Electrical.
Engg.—Engineering.
Engr.—Engineer.
Engrs.—Engineers.
Ext.—Extract.
f.—for; für.
Gaz.—Gazette.
Geol.—Geology.
Geolog.—Geological.
Ges.—Gesellschaft.
Govt.—Government.
Hüttenm.—Hüttenmännische.
Ind.—Industrial; Industriel; Industrielle.
Ingr.—Ingenieure, Ingenieros.
Inst.—Institute; Institut; Instituto.
Instn.—Institution.
Intl.—International.
Jahresber.—Jahresbericht.
Jahrb.—Jahrbuch.
Jnl.—Journal.
Mag.—Magazine.
Mech.—Mechanical.
Met.—Metallurgy.
Metl.—Metallurgical.
Mex.—Mexican.
Mfrs.—Manufacturers.
Mg.—Mining.
Min.—Mineral.
Mittlngn.—Mitteilungen.
Oestr.—Oesterreichische; Oesterreich.
Proc.—Proceedings.
Quart.—Quarterly.
Rec.—Record.
Rept.—Report.
Res.—Resources.
Rev.—Review; Revue; Revista.
Sci.—Science; Sciences.
Scient.—Scientific.
Soc.—Society; Société; Società.
Suppl.—Supplement; Supplementary.
Surv.—Survey.
Tech.—Technology.
Trans.—Transactions.
Ver.—Verein.
Verb.—Verband.
Verh.—Verhandlungen.
Univ.—University.
Zentralbl.—Zentralblatt.
Ztg.—Zeitung.
Zts.—Zeitschrift.

PART I.

GEOLOGY AND MINERALOGY.

CHAPTER I.

MINING GEOLOGY, ORE GENESIS AND MINERALOGY.

MINING GEOLOGY

Adams, F. D., Barlow, A. E., Harvie, Robt., and Baker, M. B.—*Excursions in the Eastern Townships of Quebec and the Eastern Part of Ontario.*—Guide Book No. 2, Canada Dep. of Mines, Geological Survey; 142 pp*.

Adams, F. D., Stansfield, J., Goldthwait, J. W., Keele, J., Johnston, W. A., and Raymond, Percy E.—*Excursions in the Neighborhood of Montreal and Ottawa.*—Guide Book No. 3, Canada Dep. of Mines, Geol. Survey; 162 pp*.

Argall, Philip.—*The Zinc-Carbonate Ores of Leadville, Colorado.*—Mg. Mag. April 1914; p 283; 3800 w*; 35c.

Arnold, Ralph, and Garfias, V. R.—*Geology and Technology of the California Oil Fields.*—Trans. A. I. M. E. Mar. 1914; p 383; 85 pp*; 35c.

Ball, Lionel C.—*Tertiary Oil Shales of Baffle Creek, Port Curtis District, Queensland, Australia.*—Queensl. Govt. Mg. Jnl. Jan. 15 1914; p 19; 3500 w*; 35c.

Ball, Lionel C.—*The Etheridge Gold and Mineral Field, Queensland.*—Queensland Govt. Mg. Jnl. Apr. 15 1914; p 174; 11 pp*; 35c.

Balliet, Letson.—*The Geology of the Tonopah District, Nevada.*—Mg. & Eng. World May 2 1914; p 837; 4500 w*; 10c.

Bancroft, J. Austin.—*Geology of the Coast and Islands Between the Strait of Georgia and Queen Charlotte Sound, B. C.*—Memoir No. 23, Canada Dep. of Mines, Geol. Surv.; 152 pp*.

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PART II.

ORES AND MINERAL PRODUCTS.

METALS AND METAL ORES.

CHAPTER II.

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CHAPTER IV.

LEAD, ZINC AND CADMIUM.

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CHAPTER V.

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CHAPTER VI.

ALLOYS, ANTIMONY, CHROMIUM, MANGANESE, MOLYBDENUM, ETC.

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CHAPTER VII.

TIN, NICKEL, COBALT, ALUMINUM.

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CHAPTER VIII.

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NON-METALS.

CHAPTER IX.

FUELS AND BY-PRODUCTS.

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CHAPTER X.

PETROLEUM, NATURAL GAS, ETC.

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CHAPTER XI.

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MINES AND MINING (b*).

CHAPTER XIV

TRANSPORT AND HAULAGE

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MILL AND MILLING.

CHAPTER XVI.

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METALLURGY.

CHAPTER XVIII.

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POWER AND MACHINERY.*

CHAPTER XIX.

ELECTRICITY

In Mines

Ablett, C. Antony, and Lyons, H. M.—*Application of Three-Phase Motors to Winding Engines and Hoists.*—M. & S. P. April 25 1914; p 689; 2500 w*; 20c.

Ablett, C. Antony, and Lyons, H. M.—*Electrical Driving of Winding Engines.* (Paper read before Canadian Mining Institute).—M. & S. P., Apr. 18 1914; p 647; 4300 w*; 20c.

Ablett, C. Antony, and Lyons, H. M.—*Choice of Drum for Steam or Electrical Drive.* (Paper read before Canadian Soc. of Civil Engrs.).—M. & S. P. May 9 1914; p 774; 4700 w*; 25c.

Ablett, Antony, and Lyons, H. M.—*The Electrical Driving of Winding Engines.* (Abst. of paper read before Canadian Mg. Inst.).—Canadian Mg. Jnl. April 1 1914; p 223; 5000 w*; April 15 1914; p 268; 4200 w*; 70c.

Anderson, A. R.—*Interpole Motors for Mine Locomotives.*—Coal Age May 9 1914; p 764; 2500 w*; 20c.

Barham, G. Basil.—*Electricity and Coal Mining.*—Mg. Jnl. London April 4 1914; p 338; 1300 w; 35c.

Baun, F. C.—*Economic Value of Electric Transmission.*—Jnl. Elec. P. & G. Jan. 3 1914; p 1; 4500 w*; 35c.

Booker, H.—*Construction and Operation of Substations in Coal Mines.* (Paper read before Am. Inst. Elec. Engrs.).—C. & C. Opr. Apr. 23 1914; p 261; 2000 w; 25c; Coal Age May 23 1914; p 841; 2300 w; 20c.

Booker, H. J.—*Connecting Motors in Mine Fans.*—Coal Age Feb. 7 1914; p 247; 600 w*; 20c.

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Burnham, G. B.—*Voltages of Underground Trolley Systems.* (Paper read at Nevada Industrial Safety Conference).—Jnl. E. P. & G. May 2 1914; p 376; 750 w; 35c.

Clark, H. H.—*Efficiency of Portable Electric Mine Lamps.* (Part of paper read before Coal Mg. Inst. of Am.).—Coal Age Jan. 3 1914; p 12; 2000 w*; 20c.

Clark, H. H.—*Safeguarding the Use of Electricity in Mines.*—Bull. 88 A. I. M. E.; p 715; 5 pp; 35c; C. & C. Opr. Feb. 19 1914; p 97; 1800 w; 20c. Coal Tr. Bull. Mar. 2 1914; p 2500 w; 25c.

Clark, H. H., and Crocker, R. W.—*Electric Switches for Use in Gaseous Mines.*—Bull. 68, U. S. Bureau of Mines; 38 pp*.

Clark, H. H., and Ilsley, L. C.—*The Action of Acid Mine Water on the Insulation of Electric Conductors, a Preliminary Report.*—Tech. Paper 58, U. S. Bureau of Mines; 26 pp*.

Cooper, N. K.—*Electrical Hydraulic Mining.*—Jnl. El. P. & G. Jan. 31 1914; p 91; 750 w*; 35c.

Dobbelstein, O.—*Eine neue Minenprüfundzündvorrichtung.* [A new mine-testing and shot-firing apparatus].—Glückauf Jan. 24 1914; p 134; 1000 w*; 50c.

Dunlop, R. R.—*The Application of Electricity to Coal Mining.*—Jnl. Cleveland Engg. Soc. Jan. 1914; p 225; 23 pp*; 50c.

Eaton, G. M.—*Development of the Electric Mine Locomotive.*—Trans. Am. Inst. Elec. Engrs. Apr. 1914; p 517; 12 pp*; 50c.

Easton, W. H.—*Self-Starting Motors for Mine Pumps.*—Coal Age Apr. 4, 1914; p 556; 1000 w*; 20c.

Edwards, Geo. E. — *Large Electric Hoists and Ilgner System.* [Illustrates two noteworthy installations—the Peabody Coal Co. at Nokomis, and Christopher Coal Co. at Christopher, Ill.].—Mg. & Eng. World June 13 1914; p 1103; 2500 w*; 10c.

Elwood, W. F.—*Stray Electric Cur-*

Note.—For drills, pumps, fans, haulage and winding engines, dredges, excavators, crushers, separators, conveyors, transportation, machinery, etc., see respectively "Drilling and Boring," "Pumping," "Ventilation" and other appropriate headings in "Mine and Mining," "Mill and Milling," and "Miscellaneous."

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Freeman, W. E.—*Safeguards in the Use of Electricity in Mines.* (Paper read before Kentucky Mg. Inst.).—Coal Tr. Bull. Jan. 2 1914; p 43; 2800 w; 25c; Colly. Engr. May 1914; p 619; 2000 w; 35c.

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Götz, O.—*Hauptschacht-Fördermaschine mit Drehstrom-Kollektormotoren.* [Main-shaft hoists with alternating-current collector motors].—Kali Feb. 15 1914; p 87; 1500 w*; 35c.

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Hoen, W. M.—*Mine Substations: Motor Generator Sets vs. Synchronous Converters in Coal Mines.* (Paper read before Am. Inst. Elec. Engrs.).—C. & C. Opr. Apr. 23 1914; p 262; 2000 w*; 25c.

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Kivlen, J. P. C.—*Choice of Electrical Machinery for Use in Mines.* (Paper read before Assn. of Mg. Elec. Engrs.).—I. & C. Tr. Rev., London, Jan. 2 1914; p 22; 6500 w; 35c.

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Legrand, Charles.—*Electric Traction in Mines.*—Trans. A. I. M. E. Bull. 86 Feb 1914; 4 pp*; 35c; Mg. & Eng. World Feb. 28 1914; p 409; 1900 w; 10c.

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McLain, R. H.—*Direct-Current Motors for Coal and Ore Bridges.*—Trans. Am. Inst. Elec. Engrs. June 1914; p 1009; 12 pp; 65c.

Means, C. M.—*The Safety of Underground Electrical Installations.*—Bull. 88 A. I. M. E.; p 695; 4 pp; 35c. Abst. in C. & C. Opr. May 28 1914; p 340; 1800 w; 20c.

Middagh, R. E.—*Methods and Safety in Underground Electric Mine Haulage.* (Paper read at Nevada Industrial Safety Conference).—Jnl. E. P. & G. May 2 1914; p 377; 2400 w; 35c.

Mitten, L. F.—*Types of Electric Winding Engines.*—Coal Age Mar. 7 1914; p 397; 2700 w*; 20c.

Morse, C. W.—*Electric Blasting in Shafts with Delay Action Exploders.*—M. & S. P. Jan. 31 1914; p 216; 650 w; 20c.

Mountain, W. C.—*The Utilization of Exhaust Steam for Collieries, Etc., and the Cost of Electric Current Generated.* (Paper read before North of England Inst. of Mg. & Mech. Engrs.).—I. & C. Tr. Rev. London April 10 1914; p 529; 3000 w; 35c. Colly. Guard. London April 9 1914; p 786; 2500 w; 35c.

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Swoboda, H. O.—*Self-Contained Portable Electric Mine Lamps.* (Paper read before A. I. E. E.—Coal Age May 16 1914; p 803; 4200 w*; 20c.

Thallmayer, Ludwig.—*Die Neugestaltung der elektrischen Fördermaschine durch die Einführung neuer Antriebssysteme und neuartiger Sicherheits- und Steuereinrichtungen.* [Recent change of electrical hoisting engine through the introduction of a new driving system and new types of safety and control devices].—Zts. Zentral Verbd. Bergbau-Betriebsl. Mar. 15 1914; p 25; 7500 w*; Apr. 1 1914; p 58; 6500 w*; 70c.

Turquand, F. J.—*Design and Maintenance of Miners' Electric Lamps.* (Paper read before Assn. Mg. Elec. Engrs.).—Colly. Guard London Feb 20 1914; p 401; 5000 w*; 35c. Also in I. & C. Tr. Rev. Feb. 20, 1914; p 278; 8000 w*; Mar. 6 1914; p 360; 4000 w; 70c.

Walker, Sydney F.—*Difficulties Attendant Upon the Working of Electrical Apparatus in Mines.*—El. Rev. London May 1 1914; p 799; 2000 w; 35c.

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Warren, H. M.—*New Power Developments of the D., L. & W. Coal Co. at Nanticoke, Pa.*—Coal Age June 6 1914; p 918; 4500 w*; 20c.

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——— *Alternating-Current Coal Cutter.*—Coal Age April 11 1914; p 619; 350 w*; 20c.

——— *An Interesting Locomotive.* [Describes electric motor on Cleveland ore docks].—Mg. & Eng. World May 9 1914; p 882; 300 w*; 10c.

——— *Automatic Mine Door at Seneca Colliery, near Pittston, Pa.*—Col. Eng. Jan. 1914; p 360; 600 w*; 35c.

——— *Des Lampes électriques de Mines.* [Electric lamps in mines].—Echo des Mines April 16 1914; p 1814; 1500 w; 35c.

——— *Die Elektrohängebahn in Bergwerksbetrieben.* [The suspended electric tramway in mining].—Bergbau April 2 1914; p 238; 2100 w*; 35c.

——— *Electric Drill Experiences.* (Abs. from Sibley Jnl. of Engg.).—E. & M. J. April 18 1914; p 803; 1600 w; 25c.

——— *Electric Mine Lamps.*—M. & M. April 1914; p 558; 640 w; 35c.

——— *Electrically-Operated Mine Door at the Seneca Colliery.* (Abstracted from Employes' Magazine of the Lehigh Valley Coal Co.).—Coal Age Feb. 21 1914; p 328; 900 w*; 20c.

——— *Electricity in the Clay Plant.*—Brick & Clay Rec. June 16 1914; p 1369; 6000 w*; 30c.

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schacht-Fördermaschinen. [Electrically driven main-shaft hoists].—Kohle & Erz Feb 9 1914; p 125; 2000 w*; 35c.

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——— *Problem of Replacing Hand Tramming with Electric.* (Abst. of paper read by C. Legrand before A. I. M. E.).—E. & M. J. Apr. 4 1914; p 711; 1100 w*; 25c.

——— *Report of the Department of Mines of Pennsylvania, 1912, Part II—Bituminous.*—pp 1040*.

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——— *Sautage des Coups de Mine par L'Electricité Atmosphérique.* [Firing mine blasts by atmospheric electricity].—Echo des Mines Mar. 30 1914; p 1756; 900 w; 35c.

——— *Séparateur électrique de Minerais.* [Blanchard electric ore separator].—Echo des Mines April 27 1914; p 1866; 700 w*; 35c.

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Megraw, Herbert A.—*The Treatment of Cyanide Precipitates.*—E. & M. J. Mar. 21 1914; p 606; 3000 w*; 25c.

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PART IV.

MISCELLANEOUS.*

CHAPTER XX.

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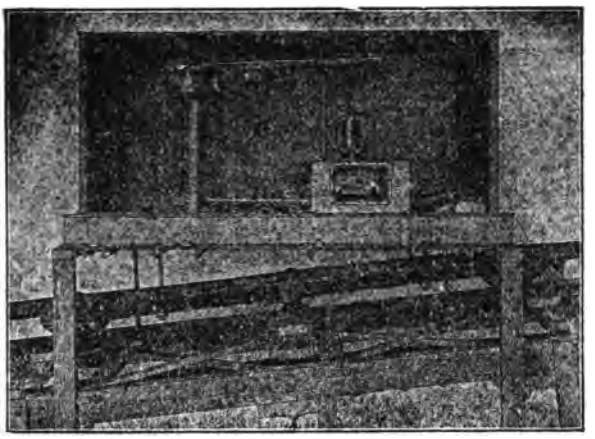

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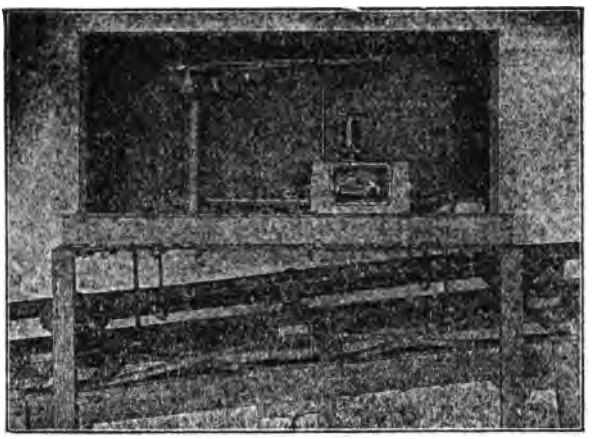

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